



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/770,502

02/04/2004

William McDaniel

243156-P0003

1756

47604

7590

04/02/2009

DLA PIPER LLP US  
P. O. BOX 2758  
RESTON, VA 20195

EXAMINER

ANDERSON, FOLASHADE

ART UNIT

PAPER NUMBER

3623

MAIL DATE

DELIVERY MODE

04/02/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/770,502	<b>Applicant(s)</b> MCDANIEL ET AL.	
	<b>Examiner</b> FOLASHADE ANDERSON	<b>Art Unit</b> 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**Requirement for Information under 37 CFR 1.105**

1. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.
2. Applicant has claimed several equations in **claims 8, 10, 12, 14, 16, 18, 20, 22, 24 and 26**. This requirement is made to determine if the equations have been derived as the result of Applicant's own work or are the equations of the claimed invention an improvement to the work of another. If the latter is the case information is requested on the basis of the work to which applicant seeks to make the claimed improvement of.
3. In response to this requirement, please provide copies of each publication which any of the applicants authored or co-authored and which describe the disclosed subject matter of **claims 8, 10, 12, 14, 16, 18, 20, 22, 24 and 26**
4. In response to this requirement, please state the specific improvements of the subject matter in **claims 8, 10, 12, 14, 16, 18, 20, 22, 24 and 26** over the disclosed prior art and indicate the specific elements in the claimed subject matter that provide those improvements.
5. In response to this requirement, please provide the title, citation and copy of each publication that any of the applicants relied upon to draft the claimed subject matter. For each publication, please provide a concise explanation of the reliance placed on that publication in distinguishing the claimed subject matter from the prior art.
6. In responding to those requirements that require copies of documents, where the document is a bound text or a single article over 50 pages, the requirement may be met

Art Unit: 3623

by providing copies of those pages that provide the particular subject matter indicated in the requirement, or where such subject matter is not indicated, the subject matter found in applicant's disclosure.

7. The fee and certification requirements of 37 CFR 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 CFR 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 CFR 1.105 are subject to the fee and certification requirements of 37 CFR 1.97.

8. The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained may be accepted as a complete reply to the requirement for that item.

9. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

/Beth V. Boswell/

Supervisory Patent Examiner, Art Unit 3623

### **DETAILED ACTION**

10. This is the first non-final office action in response to Applicant's submission filed on 02/04/2004. Currently, claims 1-29 are pending.

#### ***Information Disclosure Statement***

11. No information disclosure statement (IDS) was considered by the Examiner in the prosecution of the claims in the instant application.

#### ***Specification***

12. The disclosure is objected to because of the following informalities: 28 and 29. The claimed limitation recites for example a "processor," "memory" and "computer program product," which are not supported by the specification. Therefore the specification is defective as it relates to these originally filed features; see MPEP 608.01(1).

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 101***

13. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

14. In order for a method to be considered a "process" under §101, a claimed process must either comply with the "machine-or-transformation test" (1) be tied to a particular machine or apparatus or (2) transform a particular article to a different state or

Art Unit: 3623

thing. In re Bilski, 545 F.3d 943, 88 USPQ2d 1385 (Fed. Cir. 2008); Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972). If neither of these requirements is met by the claim, the method is not a patent eligible process under §101 and is non-statutory subject matter.

With respect to independent **claim 1**, the claim language recites the steps of setting determining, identifying, etc.; however the claim language does not include the required tie or transformation.

**Claims 2-27** are rejected based upon the same rationale, wherein the claim language does not include the required tie or transformation.

15. **Claim 1** is rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. The claimed invention as a whole must be useful and accomplish a practical application. This claim appears to be directed towards a series of algorithm steps which produces no “useful, concrete and tangible result.” State Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F.3d 1368, 1373-74, 47 USPQ2d 1596, 1601-02 (Fed. Cir. 1998). The purpose of this requirement is to limit patent protection to inventions that possess a certain level of “real world” value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96 (1966); In re Fisher, 421 F.3d 1365, 76 USPQ2d 1225 (Fed. Cir. 2005); In re Ziegler, 992 F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)), see MPEP 2106(II)(A).

***Claim Rejections - 35 USC § 112***

16. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

17. Claims **8, 10, 12, 14, 16, 18, 20, 22, 24 and 26** are rejected under 35

U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The claimed limitations are directed towards equations. The equations include undefined variables thus rendering the limitation indefinite. Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). For purposes of Examination the Examiner assumes that claimed variables are constant with those identified throughout the specification.

18. Claim **9** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The claim uses the undefined term “transient individual space level” thus rendering the claim indefinite. For purposes of examination the term is interpreted to mean non-group rooms.

***Claim Rejections - 35 USC § 102***

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 3623

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

20. **Claims 1-5, 7, 9, 11, 17, 25, and 29** are rejected under 35 U.S.C. 102(b) as being anticipated by Lawrence et al (A Taxonomy and Research Overview of Perishable – Asset Revenue Management: Yield Management, Overbooking and Pricing, 1992).

### **Claim 1 and 29**

Lawrence teaches a method for calculating a potential optimum yield for an entity for a set of demands including both transient demands and group demands comprising:

- setting a yield formula for calculating a yield that includes both transient yield from transient individual space and group yield from group individual space and group function space (**Lawrence – p. 835 table 1 further in the context of Lawrence air travel all customers are transient therefore any non-group customer would be the equivalent of the claim transient and p.836, section 4.9 -4.10**);
- determining constraints related to the yield formula (**Lawrence - p. 838, section 4.14; “pick a fixed allocation  $q^*$  prior to reserving the first customer, know that it will not be changed later for any reason”**);
- determining bounds related to the yield formula (**Lawrence - p. 838, section 4.14; “pick a fixed time  $t^*$  prior to reserving the first customer and accept all request prior to  $t^*$ , know that it will not be changed later for any reason”**)



Art Unit: 3623

- identifying which demands should be accepted in order to optimize the yield, subject to the constraints and the bounds (**Lawrence – p. 838, section 4.14; “select a (q, t) decision rule . . . prior to the first reservation”**); and
- determining the potential optimum yield utilizing the demands identified in the identifying step (**Lawrence – Figure 2 p. 837 and p. 838, section 4.14 “monitor everything continuously and decide when to curtail reservations” where it is implied that the decision to curtail is based on the rules set forth in step “c”**).

With respect to **claim 29** which is the medium used to implement the method of claim 1 it is therefore inherent in the method as such the claim is rejected based upon the same rationale given above.

### **Claim 2**

Lawrence teaches all the limitations of claim 1 and further teaches wherein the identifying step is performed using mixed integer linear programming techniques (**Lawrence - p. 841 “the model uses binary decision variables in a linear integer programming formulation.”**)

### **Claim 3**

Lawrence teaches all the limitations of claim 1 and further teaches wherein the yield comprises revenue (**Lawrence p. 831 “we propose to replace the term yield management with a new, more appropriate term perishable asset revenue management” therefore it is inherent that all revenue management calculations are equivalent to old and well know yield management thus the yield is revenue.**)

Art Unit: 3623

#### **Claim 4**

Lawrence teaches all the limitations of claim 1 and further teaches wherein the yield comprises profit (**Lawrence p. 833 “throughout this paper . . .the terms profit and contribution almost synonymously . . . if contribution is maximized, then profit is maximized” and p. 835 “this extension of traditional yield management . . .it is possible to make pricing and allocation decision jointly in the hope of improving profit”**).

#### **Claim 5**

Lawrence teaches all the limitations of claim 1 and further teaches comprising assigning a small value as a cost of a transient upgrade, and including the small value in the transient yield (**Lawrence – p.840, see “Brumelle et al” equation in second col.**).

#### **Claim 7**

Lawrence teaches all the limitations of claim 1 and further teaches determining at least one upper bound transient constraint, the upper bound transient constraint ensuring that more transient individual space than available is not assigned (**Lawrence p. 835, “the threshold curve for limiting the number of discounted items made available” and figure 1, p. 835 and p.837 section 4.12**).

#### **Claim 9**

Lawrence teaches all the limitations of claim 5 and further teaches determining a transient upgrade constraint that ensures that an assigned transient individual space

Art Unit: 3623

level is at least as high as a requested transient individual space level (**Lawrence – figures 1 and 2 and p.840, see “Brumelle et al” equation in second col.)**

#### **Claim 11**

Lawrence teaches all the limitations of claim 1 and further teaches determining a transient yield constraint, incorporating transient individual space yield information (**Lawrence - p. 838, section 4.14; “pick a fixed allocation  $q^*$  prior to reserving the first customer, know that it will not be changed later for any reason”**).

#### **Claim 25**

Lawrence teaches all the limitations of claim 1 and further teaches determining an upgrade function space constraint that ensures that transient upgrades and group upgrades are not given when not necessary (**Lawrence – p. 840, section 5.5, “probability  $\gamma$  of an upgrade if a customer is denied a discount seat; and Brumelle et al equation second col., p. 840.”**)

### ***Rejections - 35 USC § 103***

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. **Claims 6, 13 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al (A Taxonomy and Research Overview of Perishable – Asset

Art Unit: 3623

Revenue Management: Yield Management, Overbooking and Pricing, 1992) in view of Menninger (2003/0009386 A1).

### **Claim 6**

Lawrence teaches all the limitations of claim 1 and further teaches, **“the obvious advantage to repeated applications is that actual bookings are used to reduce the uncertainty in the forecast of expected demand”** see Lawrence p. 842; however is silent on further comprising comparing actual total yield to the potential optimum yield.

Official Notice is taken that it is an old and well know business practice to compare planned or potential yield to the actual yield as evidenced in Menninger **(Menninger – par 0291, “comparing actual sales to forecasts”)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the invention of Lawrence the comparing actual total yield to the potential optimum yield as taught by the old and well known business practice since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

### **Claim 13**

Lawrence teaches all the limitations of claim 5 and as well as **the Brumelle et al equation, see Lawrence p.840**; however is silent on determining a total transient upgrade constraint that comprises a total number of individual spaces where an upgrade was assigned.

Art Unit: 3623

Official Notice is taken that summarizing the total number of spaces sold at a pricing level was old and well known in the art at the time the invention was made as evidenced by Menninger (**Menninger – par. 339, “a total cost can be calculated based on the first cost parameter and the second cost parameter in operation”**)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the invention of Lawrence the determining a total transient upgrade constraint that comprises a total number of individual spaces where an upgrade was assigned as taught by the old and well known business practice since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

### **Claim 28**

With respect to **claim 28** which is the system used to implement the method of claim 1 and is therefore inherent in the method as such the claim is rejected based upon the same rationale given above with respect to claim 1. Claim 29 additionally recites the additional limitation not taught by Lawrence; however Menninger teaches these features.

- a processor (**Menninger 0409**);
- a memory for storing a set of demands, the memory connected to the processor (**Menninger 0410**);

Art Unit: 3623

- wherein the processor is configured to perform the steps (**Menninger 0409**)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the invention of Lawrence the system hardware components by Menninger since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

23. **Claims 15, 17, 19, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al (A Taxonomy and Research Overview of Perishable – Asset Revenue Management: Yield Management, Overbooking and Pricing, 1992) in view of Bitran et al (An Application of yield management to the hotel industry considering multiple day stays, 1995).

#### **Claim 15**

Lawrence teaches all the limitations of claim 5 and further teaches space protection constraint that ensures that more individual space than available is not assigned (**Lawrence - Brumelle et al p. 839, second col.**); however is silent on determining a function space than available is not assigned.

Official notices is taken that it would have been obvious to one of ordinary skill in the art to repeat the Brumelle equation in terms of the function space since Lawrence does not differentiate between room types in terms of example first class, coach,

Art Unit: 3623

singles, doubles, ballrooms - as evidenced by Bitran (**Bitran p. 434 “condition is given by constraint . . . for each class of room”**)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the invention of Lawrence the space protection constraint that ensures that more function space than available is not assigned as taught by the old and well known business practice since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

#### **Claim 17**

Lawrence teaches all the limitations of claim 5 and further teaches **determining capacity before turning away customers; see Lawrence p.839, last par. first col.;** however is silent on determining a group space opportunity constraint that ensures that a group opportunity is fully satisfied before being accepted.

notices is taken that it would have been obvious to one of ordinary skill in the art to repeat the Brumelle equation in terms of the customer types i.e. single or groups as evidenced by Bitran (**Bitran p. 436 “multiple product case . . . and three classes of customers**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the invention of Lawrence the determining a group space opportunity constraint that ensures that a group opportunity is fully satisfied before being accepted as taught by the old and well known business practice since the

Art Unit: 3623

claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

### **Claim 19**

Lawrence teaches all the limitations of claim 1, but does not teach determining a group yield constraint that incorporates individual space cost information and function space cost information for a group opportunity.

Bitran teaches in an analogous art determining a group yield constraint that incorporates individual space cost information and function space cost information for a group opportunity (**Bitran p.434 “the maximum number of customers that can be accepted in period k is bound by the number of request in that period”**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the invention of Lawrence the determining a group yield constraint that incorporates individual space cost information and function space cost information for a group opportunity as taught by the Bitran since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

### **Claim 27**

Lawrence teaches all the limitations of claim 5 but does not teach wherein the bounds comprise at least one step selected from the group consisting of:



Art Unit: 3623

- setting the amount of accepted transient individual spaces to greater than or equal to 0;
- setting the amount of assigned transient individual spaces to greater than or equal to 0;
- setting the amount of assigned group individual spaces and group function spaces to greater than or equal to 0;
- setting the value of group opportunities to greater than or equal to 0, and less than or equal to 1;
- setting the value of group function space greater than or equal to 0, and less than or equal to 1; and
- setting the value of space protection to greater than or equal to 0, and less than or equal to the amount of individual space available.

Bitran teaches in an analogous art wherein the bounds comprise at least one step selected from the group consisting of:

- setting the amount of accepted transient individual spaces to greater than or equal to 0; **(Bitran p.434 see boundary conditions first par. first col. and p.435 step 2.1)**
- setting the amount of assigned transient individual spaces to greater than or equal to 0; **(Bitran see boundary conditions first par. first col. and p.435 step 2.1)**

Art Unit: 3623

- setting the amount of assigned group individual spaces and group function spaces to greater than or equal to 0; **(Bitran see boundary conditions first par. first col. and p.435 step 2.1)**
- setting the value of group opportunities to greater than or equal to 0, and less than or equal to 1; **(Bitran see boundary conditions first par. first col. and p.431 Problem MP(C))**
- setting the value of group function space greater than or equal to 0, and less than or equal to 1; **(Bitran see boundary conditions first par. first col. and p.431 Problem MP(C))** and
- setting the value of space protection to greater than or equal to 0, and less than or equal to the amount of individual space available. **(Bitran see boundary conditions first par. first col. and p.431 Problem MP(C))**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the invention of Lawrence the specific bonds requirements as taught by the Bitran since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

24. **Claim 21**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al (A Taxonomy and Research Overview of Perishable – Asset Revenue

Art Unit: 3623

Management: Yield Management, Overbooking and Pricing, 1992) in view of Takagi et al (US Patent 5,881,231)

### **Claim 21**

Lawrence teaches all the limitations of claim 1, but does not teach determining a function space constraint that ensures that a particular function space is not used more than once during a given time period.

Takagi teaches in an analogous art determining a function space constraint that ensures that a particular function space is not used more than once during a given time period. (**Takagi – col. 28, lines 43-45; “case where two or more schedules overlap at the same time zone, the double booking is detected. In such a case . . . one of the overlapping schedule is to be deleted”**)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the invention of Lawrence the determining a function space constraint that ensures that a particular function space is not used more than once during a given time period as taught by the Takagi since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

25. **Claim 23**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al (A Taxonomy and Research Overview of Perishable – Asset Revenue

Art Unit: 3623

Management: Yield Management, Overbooking and Pricing, 1992) in view of Tromezynski et al (US Publication 2006/0010023 A1)

Lawrence teaches all the limitations of claim 1, but does not teach determining an assigned function space constraint that ensures that an assigned function space is at least as big as a requested function space.

Tromezynski teaches in an analogous art determining an assigned function space constraint that ensures that an assigned function space is at least as big as a requested function space (**Tromezynski – 0043 confirmed the availability of guest room and meeting space at the meeting planner's chosen venues**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the invention of Lawrence the determining an assigned function space constraint that ensures that an assigned function space is at least as big as a requested function space as taught by the Tromezynski since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

### ***Conclusion***

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kimes (Group Forecasting Accuracy in Hotels, 1999) teaches tying group demand to forecasting. Netessine (Yield Management, 2002) teaches an overview of yield management in the field of perishable revenue management. Cross

Art Unit: 3623

(Revenue management's renaissance, 2009) teaches group optimizing using revenue management. Geoghegan et al (US Patent 7,328,166 B1) teaches yield subsystem to increase hotel revenues.

27. A requirement for information under 37 CFR 1.105 is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FOLASHADE ANDERSON whose telephone number is (571)270-3331. The examiner can normally be reached on Monday through Thursday 8:00 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Folashade Anderson/  
Examiner, Art Unit 3623

/Beth V. Boswell/  
Supervisory Patent Examiner, Art Unit 3623